

Quick Strokes

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FALL, 1979

Dvorak International Federation celebrates a year of organizational growth, two years of keyboard productivity

Barbara Blackburn, world's champion keyboard operator, hit up a pace that registered 150 words per minute on a stroke-counting attachment before a crowd of witnesses at the Nov. 16, 1979, conference of the Dvorak International Federation at Wilsonville, Oregon.

The stroke counter was on a Vydec word-processing unit with the Oregon Alternate variant of the Dvorak arrangement on the keyboard, equipment with which Mrs. Blackburn had no chance to become familiar. Her sponsor on this occasion is the SCM corporation, and observers thought that her score on the SCM Coronamatic typewriter on which she also demonstrated her skill at the OA arrangement would have been higher. Her regular job is in the accounting department at General Telephone Northwest, Everett, Washington.

At the microphone during the panel discussion, Mrs. Blackburn answered the question, "How does a pretrained operator with Dvork skill only, get a job?" On the basis of a series of changes of job in the course of a long and rewarding career at a Dvorak variant keyboard, she advises, "Own your own machine. Invite the employer to lay a qwerty-arranged machine on a shelf."

Of an attendance of about 180, at least thirty people raised their hands in response to "Are you a Dvorak operator?" Almost all are young and healthy and may aspire to championship scores of their own.

Most of the Oregon Alternate operators from Oregon are, of course, grown women. One from Washington (town of Steilacoom) is Tinda Smith, who answered questions as follows: Age? "Eleven." Grade? "Six." Dvorak operator? "Yes." Speed? "Fifty." Got your machine? "Last summer."

Professor Patricia Wells, of Oregon State University, Corvallis, gave, at the breakfast session, a brisk summary of the advantages of Dvorak keying. She also chaired the midafternoon panel discussion. Other panelists:

Albert C. Kolb, teacher, Carmel (California) Middle School teacher. His main point was that a typewriter that is blessed with an easy-to-learn keyboard promotes learning in the elementary-school subjects; whereas, the pencil only impedes it.

Alma George, instructor in Business Education from Portland Community College.

Yvonne Craigwell, word-processing operator for the Oregon Public Employees Retirement System.

Helen Baldwin, vice-president of DIF and word processing manager for Employee Benefits Insurance Co., Portland.

Sherm Washburn, retired public relations executive and long-time Dvorak-keyboard user-operator.

A one-line keynote for the conference is found in the title, "More Services with Less Money", of the address by Denny Miles, press secretary to Gov. Robert W. Atiyeh of the state of Oregon. On the evidence accumulated by Thurman J. Clark, president of DIF and assistant director of the Oregon Public Employees Retirement System, and reported in his remarks at the morning session, improvements in public-employee productivity can, indeed, be made administratively, as has been the case with alternate-keyboard arrangement entry in the word-processing centers of state agencies.

Speaking of Dvorak operators, "We don't have to pay them a higher wage," he said. *Quick Strokes* comments that it will be interesting to note the outcome when employers do offer a wage differential for Dvorak skill.

Thomas S. Booz, of Plantation, Florida, president of the 3 Readiness Society, spoke on the application of the simplified keyboard at the preschool and primary levels. It serves to familiarize the child with properly shaped letters, digits, and punctuation marks without the complications of the traditional arrangement.

Other long-distance travelers were Esther Gill, a teacher from Huntsville, Alabama, Virginia Russell, from Brandon, Vermont, and Robert Morton, from Chicago.

Professor Earl MacCannel, of the University of Portland, recalled his days on the staff of the late, great inventor, author and teacher August Dvorak.

Two speakers discussed job enrichment. They are Gayle Calloway, General Services manager for Farwest Federal Savings and Loan, and Ethyl Hanson, instructor in Business Education at Portland Community College.

Philip Davis brought greetings from Hermione Dvorak, of Seattle, from Ronald Watson, of Newport Beach, Australia, and from himself as chairman of American National Standards Working Group X4DSK and as publisher of *Quick Strokes*.

Rearranging the TRS-80 keyboard

By JON ETHERTON

I wrote a "patch" to Microsoft Level II BASIC to provide DSK as an option. Changing the keybuttons was simple. They just pop off and on. Getting the computer to recognize that I had changed the legends was harder.

I intercepted the keyboard scanning program so as to change the character sent to the computer according to a look-up table. The technique can be applied to any small computer if you know where to intercept the keyboard input.

I also included a way of switching from DSK to qwerty and incorporated keyboard debounce necessary on a TRS-80. The whole program took 224 bytes and allows the user to change any key function by changing the look-up table.

From the Managing Director, International Secretaries

While reading the letter (August 18) from the managing director of Innovcom concerning microprocessors it struck me that perhaps the manufacturers of small business computers and word processors are laying the blame for managers' "apathetic" and unsympathetic attitudes at the wrong door.

It was suggested that one must be a mathematical whizz-kid to understand even the rudiments of machines like the word processor, but this would not be the case if the designers did not persist in using a keyboard layout which they are copying from the old typewriter keyboard. A manager will be much more interested in a system that his staff can operate efficiently and therefore cost effectively.

Qwerty, the current layout of typewriters in use in the UK, was invented when all typewriters were manual and rather slow in responding to the typists' touch. To prevent the typist hitting the keys faster than the machine was capable of responding, the keyboard was deliberately laid out in such a way as to actually slow her down! The letters used most frequently were placed away from the home centre keys, and the left hand was given more work to do than the right, specifically because most people are known to be right handed!

Having a typewriter deliberately designed to slow the typist down, it is little wonder that typing on a Qwerty keyboard requires such intensive practice if one wishes to reach a reasonable speed and accuracy.

On the other hand, the DSK simplified keyboard places the most frequently used letters (the vowels in particular) in the home keys so that the fingers actually have the minimum distance to travel. The left bias has also been removed so that the right

hand does most of the work. Promoters of the system claim that the keyboard can be learned from scratch within a few weeks only and that fatigue mistakes are greatly lessened. Yet Qwerty still exists because the colleges and businesses won't combine to make the once-only effort to change.

Why manufacturers of the new word processors and computers are so proud that their input-keyboard is Qwerty in layout beats me. Perhaps they are unaware of how and why Qwerty originated.

With the new generation of office machines, we have a unique opportunity to change. While we are making the switch to more efficient systems to handle typing, why not go for the improved layout? Manufacturers can then claim (rightly) that their machines do not need trained typists to operate them.

—Roger Hutton, International Secretaries,
17, Berkeley Street, W1

The foregoing is from the London, England, *Financial Times* of August 22, 1979, Letters to the Editor section. Mr. Hutton, to whose courtesy we owe this contriution, has received some enquiries. He would appreciate any word from manufacturers or dealers with connections in the United Kingdom, on what equipment with a Dvorak or variant keyboard is available in that market.

The reason for the qwerty locations of characters it gives is plausible — after all, what other reason can there be? It is known that C. L. Sholes was not satisfied with them. A Sholes patent of about 1890 shows a different arrangement. Mr. J. F. White, will you kindly supply the number of it?

Kolb videotape is on hand and for rent at Quick Strokes

"Title, Typewriters: Dvorak Made a Better One

"Narrated by Albert C. Kolb, Carmel Middle School

"Time, 14 minutes and 19 seconds

"Narrator and secretary demonstrate an innovative and interesting alternative to the standard keyboard. Motivates student interest in the typewriter and in developing typing skills.

"Date made, May, 1979."

This reads the front-cover card on a 1-inch videotape which is now on hand and for rent at Quick Strokes, Box 643, West Sacramento, CA 95691. Rental, \$5 a week.

In Sacramento, the deck for showing a one-inch tape can be rented for \$50 a day, with a \$350 deposit. Costs probably similar elsewhere. A big hit as a panelist at Wilsonville, Kolb, on tape, should start your local Dvorak association off with a good boost.

A polite acknowledgment from Robert Matsui, M. C.

From a letter to a constituent in the Third District of California:

"Also, I appreciate your sending me a copy of the new arrangement of characters on alphanumeric keyboards. I note that you have also sent a copy to the Government Activities and Transportation Subcommittee. Therefore, I will follow closely the actions of the subcommittee on this topic. . . . Sincerely, Robert T. Matsui, Member of Congress".

The chairman of the subcommittee is John Burton, and "House of Representatives, Washington, DC 20515" is sufficient address. A committee chairman is like a senator — anybody can write to him. If your own congressman is on any subcommittee of the Government Operations Committee, feel free to write to him or her. With the versatile equipment for computer entry, word processing, and communication that is now available, it would be reasonable for some federal agency to sponsor a new demonstration and evaluation program.

Burton's district is Marin County and part of San Francisco. Matsui's is Sacramento and suburbs.

Many, many thanks, Ralph, for your direct and timely aid

Atlanta, GA 30301
11 September 1979

Dear Mr. Davis:

Your unique role will continue, I believe, regardless of other productive Dvorak advocates entering the field. QUICK STROKES offers another voice, an independent perspective, a powerful, savvy, and remarkably up-to-the-minute report of Dvorak state-of-the-art. And, the growing market for this kind of information demands a selection of sources that includes such a publication.

Readers like me will find other publications useful and interesting, but you see, if you ever ceased publication, we would always wonder what QUICK STROKES would have said about some development, or whether there might be some piece of news missed by others that you would have dug up.

Your publication is beautifully written, obviously the work of a professional. Forgive me for speaking so boldly, but your decision not to have it typeset is wrong. I am afraid it may give QUICK STROKES an amateurish "look" that it does not deserve.

I appreciate you and your work so much that enclosed is my \$300 check (putting my money where my mouth is). Please feel free to use this to have your fine publication professionally typeset and printed.

I am a marketing specialist for the state of Georgia (Assistant Director, Research Division, Georgia Department of Industry and Trade). If you would like to use me as a sounding board on updating marketing strategies for QS, I am happy to be of help.

Thanks again for your wonderful publication.

Sincerely, Ralph Dobbs

Good achievement, nice report

Dear Phil and Harriet:

Hello! Hope you are both doing well.

I love the typewriter and I'm up to about 40 wpm. I'm having no trouble switching to the old keyboard which I use when working with the university computer.

School started last week, and as a freshman, everything is completely different than I was used to in high school. I only have five classes and not too much homework. Well, take care and I'm very pleased with my new typewriter and definitely prefer the Dvorak keyboard. Keep up the good work!

Love, Lenora White

"School" is Colorado State University, Fort Collins. The typewriter is an SCM Electra portable, the gift of wise grandparents Eugene and Alda Reed, of Los Angeles, California.

Bibliographic note

Thanks to Virginia Russell, of Brandon, Vermont, for a copy of "The Tyranny of Qwerty" from *People's Almanac* No. 2, published in 1978. It is a reprint of the article in *Saturday Review Science* for October, 1972, pages 37 to 40, by Charles Lekberg.

In the *Almanac*, it appears on pages 1375 to 1378, in a section called "Solutions — Practical Proposals and Brand-new Approaches."

Sample school presentation

The letter below is on stationery of the Salem (Oregon) Public Schools, William M. Kendrick, superintendent, and Sprague High School:

January 22, 1979

Dear Sprague Parent:

This letter is being sent home with your son or daughter to inform you of a new typing program which is available at Sprague High School.

Sprague has five Dvorak typewriters available to all levels of typing students. The Business Department wants you to know about the advantages and disadvantages of training on this keyboard. Also we are requesting your permission before asking your son or daughter to participate in this program.

The Dvorak keyboard is sometimes called the "scientific key-

board" because the keyboard placement of letters has been meticulously planned out. The traditional arrangement of keys on the typewriter has been scrambled. (See attached sheet #1)

Sprague's Business Department feels the Dvorak program is the typing method of the future because of the following advantages:

- 1) It is easier to learn; takes less time to remember key locations.
- 2) Easier to operate; less fatiguing since the majority of typing is now located in the home row. (See attached sheet #2).
- 3) More accurate; less mistakes are made when fewer reach strokes have to be made.
- 4) The Dvorak method is faster; some proponents claim speed increases of 35-100% over the Qwerty keyboard.

The disadvantages of training on the Dvorak typewriter might include:

- 1) Finding a Dvorak typewriter for personal or business use to type on.
- 2) Finding a job where Dvorak skills could be used.
- 3) Slow acceptance from the general public to change something that has been used for years.

In response to the above "disadvantages," the following circumstances are now found to exist in regards to the Dvorak typewriter:

IBM, Olivetti and Smith Corona are some of the manufacturers which have typewriters available with the Dvorak keyboard. Camwil Incorporated of Hawaii makes a replacement typing element (about \$65) which can be placed on an IBM Selectric typewriter which converts it to a Dvorak machine. For best results, some minor impression adjustments should also be made when using the Camwil element. Current costs for this conversion process run between \$25 to \$60.

The State of Oregon has been training and converting secretarial positions in several departments to the Dvorak keyboard. This eventually may open up potential training stations for Sprague's Cooperative Work students. Possibly of more importance is that in addition to the State positions — other businesses in Portland, Eugene and Corvallis are hiring Dvorak-trained secretaries. So for the first time, job placement for some students trained on the Dvorak keyboard is available.

Only time will prove or disprove the resistance to change that many people feel. We hope that the types of benefits gained by being trained on the Dvorak keyboard will stimulate other Businesses and Schools to convert to this keyboard in the near future.

Currently five Advanced Typing students at Sprague are converting from the Qwerty to the Dvorak keyboard. Each student has indicated that they like the new system better. They also have indicated that they do not want to go back to the old keyboard.

To help explain the Dvorak system, we have enclosed a copy of the Oregon Statesman's article about the State of Oregon's Dvorak program. Space limits the amount of material that we are able to send home at this time.

If you feel that participating in the Dvorak typing program would be in your son's or daughter's best interest, please fill in the form at the bottom of this page. Have your son or daughter return the form to their typing teacher at Sprague.

If you have any questions or wish further information, please contact Mary Helen Socolofsky or Joe Taylor at Sprague High School.

Sincerely, Joe Taylor, Team Leader Business Education Department

Strong said, "not now" and not "not ever"

"The Federal Government has no authority nor inclination to prescribe which keyboard should be used for the teaching of beginners in typewriting in the schools and colleges of this country." See "A Comparative Experiment in Simplified Keyboard Retraining," a 1956 report by Earl Strong, Ph.D., of an experimental application of the classic Dvorak arrangement of characters on typewriter keyboards.

The book is out of print but is in many libraries that are repositories of the Utilization and Disposal Service of the federal General Services Administration. The list is available from that service. There are 41 pages of text and vi pages of cover and

foreword, available from Quick Strokes at 50 cents a sheet, in photocopy. In California, 53c.

The quoted sentence appears on page iv of the foreword. In it, Strong, speaking with the voice of the twelve agencies that are listed on page 3 of the text, promises not to discriminate against operators whose skill is on the traditional arrangement and, likewise, not to discriminate against candidates who offer Dvorak skill.

For a freshly graduated, or freshly dropped-out, operator, an entry-level job, even on federal civil service, is, indeed, something to write home about. Dvorak skill is the quickest, easiest way to get that. It pays a wage on which the operator can save and can invest in an office-model, OAK-arranged machine, and thus become more independent. The time that is saved by choosing OAKA can be invested in more drill for outstanding speed and accuracy or in drill at the keyboard on the wanted skills in vocabulary, spelling, grammar, and punctuation.

Significant standards meetings

Directors of the Dvorak International Federation met on Aug. 1, 1979, with the participation of C. C. Christensen, of the State of Oregon Executive Department, and decided that the arrangement of characters that would be a DIF standard is the one shown elsewhere in this issue of QS.

American National Standards Working Group X4DSK met on October 27, at the Kolb home in Seaside, California, and confirmed the February decision to submit for ballot a draft proposed standard which, for a 44-key board for correspondence or word processing, is identical to the DIF standards.

The American National Standards committee of which X4DSK is a subcommittee, namely, ANSC X4, will meet at 10 a.m. on Jan. 16, 1980, for a two-day meeting. IBM San Diego, 1550 Hotel Circle North, is the host. The scope of X4 is office machines and supplies. Its chairman is J. P. Ancona, in care of IBM Corp., Parson's Pond Road, Franklin Lakes, New Jersey 07417, telephone (201) 848-3462. The chairman of the Dvoraklike arrangements working group is on the agenda for a report.

Appreciation

Dear Phil:

Thank you very much for your contribution to the success of the 1979 DIF Annual Conference. Your participation was of considerable interest and was deeply appreciated.

Sincerely, Thurman J. Clark,
President, Dvorak International Federation
P.O. Box 13313, Salem, OR 97309

Excerpt from "Report of Carmel Middle School Experiences With ASK Typewriters"

By Albert C. Kolb and Jay Criddle

The author changed from Qwerty to ASK and doubled his typing score. He self-taught himself the keyboard in ten hours, but for a while when composing, his fingers reverted to Qwerty. The most difficult key to learn was "P". In the "heat of composing" the right little finger reached up instead of the left forefinger. In about six weeks this corrected itself and speed was doubled. "Learning the Keyboard" as used in this report means the ability to type an alphabetical sentence without looking at the keys.

The authors introduced the ASK to Carmel Middle School during the 1977-1978 school year. SCM Corporation loaned the school nineteen Electra Automatic typewriters, ten Qwerty and nine ASK, for an "experiment".

Dr. Howard McFann of McFann-Gray and Associates (formerly Director of Research for Human Resources Research Organization) assisted in setting up this experiment. He monitored it and reviewed the data obtained. In doing so he became convinced

Dvorak conversion for Radio Shack TRS-80 micro-computer, \$10. Information \$2. John Etherton, Star Route, Pinehurst, ID 83850. (208) 682-2172.

ASK SCM's here now, 10% off. Books, supplies. ASK US for info! Belmont Adams, 4 Park Ave., Scarborough, ME 04074.

that ASK was for him. He purchased his own Electra Automatic ASK and learned the keyboard after quitting Qwerty in frustration years ago.

As with many human experiments, things did not go as planned. Typing students were given the option of selecting the Qwerty or ASK machines. Students selecting the ASK machines were different than those selecting the Qwerty. The ASK group contained many more atypical students, so it was impossible to conduct a comparative study. However, some interesting observations were made during the year.

Sixth, seventh and eighth grade students using ASK at Carmel Middle School have averaged learning the ASK keyboard in ten hours and at the end of a semester averaged 49 correct words per minute. A seventh grader learned the keyboard in six 55 minute periods and was typing 56 correct words a minute at the end of the semester. One eighth grade ASK typist in the twelfth week was able to type 65 correct words per minute for five consecutive minutes. Carmel Middle School has not had a Qwerty typist reach this speed in a semester.

One father visited the class and watched his son speedily type on ASK. The father said, "He is so uncoordinated, I never thought that he could learn to type. It is amazing." This "uncoordinated" son had learned ASK in 16 class periods. Only a few, rare, speedy Qwerty kids have learned their keyboard faster.

The author has had experience with several less coordinated students with identified learning disabilities, (dyslexia, cerebral palsy, etc.). These students were able to type with ASK. He is sure that many would not have made it with the Qwerty. That 70% work load on the home row is the key. They get needed early reinforcement and stay at the task of learning the keyboard.

One cerebral palsied student was able to brace his hands on the desk in front of the machine. With his hands anchored on the front of the machine, he learned ASK in 14 class periods. He began typing much of his school work. For the first time in his school career he was able to communicate on paper. On the 15th day he was sent from his Language Arts class to the Typing room to do his "word list" and other L.A. assignments. He came into the typing room to do his school work, before school, during lunch and during L.A. class time. On the 27th day of ASK instruction

he typed an absolutely beautiful ditto master, the agenda of a student council meeting.

The Carmel Unified School District has now purchased with handicapped funds, an ASK typewriter for his use at school. He also has his own machine at home.

(End of excerpt. The complete report, eight pages of typescript, may be ordered from Quick Strokes, Box 643, West Sacramento, CA 95691, at \$4, postage and handling included. In California, add 24c tax.)

Exhibits at DIF conference feature Oregon alternate keyboard arrangement

Besides Vydec and SCM, which are mentioned elsewhere in this issue, two more manufacturers brought exhibits to the 1979, Wilsonville, conference of the Dvorak International Federation. They are CPT and Wang. CPT is listed as Continental Systems, Inc., in the Portland, Oregon, telephone directory. Their sales representative is Carl T. Kleiber. Wang is Wang Laboratories.

Although a consensus seems to be forming around the Oregon Alternate keyboard arrangement, which is shown in the diagram accompanying this article, it would be well for the prospective purchaser or lessee to submit a diagram with his order for equipment from any company. The acronym OAKA is a new one, and the others that have been applied, namely, ASK, DSK, DVORAK, or the Dvorak, are either too broad or else designate some variant than the Oregon Alternate.

On typewriters, the specified arrangement is built in. In the case of word-processing units or the communication terminal (Series 8000 from CPT), they can be ordered with OAKA (or other Dvork variant) built in, or, at extra cost, with both the old and the newer arrangements built in. The operator can, in the latter case, select either arrangement, by means of a toggle, a button, or a program disk.



Oregon Alternate Keyboard Arrangement

Quick Strokes

Box 643
West Sacramento, California 95691

Telephone 916-446-3377

Philip Davis, publisher